

**PATIENT HEALTH PROFILE DURING TAKING PREOPERATIVE MEDICATION WITHNOT
TAKING SEDATION**

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Abstract

Colonoscopy may be a standard and useful examination within the diagnosis of colorectal diseases; however, it always causes pain to patients. Some patients receive narcotic drugs.

Patients and Methods

a complete of 217 patients (109 men, 108 women) undergoing a diagnostic colonoscopy without sedation were analyzed prospectively. The procedures were dispensed by three experienced endoscopists in an exceedingly eye. The colonoscopic examination was performed by one person using the short-axis method. Questionnaires to guage abdominal pain during or after colonoscopy without sedation were collected. As premedication (Group A) and for people who didn't receive meperidine (Group B). Abdominal pain was evaluated employing a visual analog scale from 0 to 10.

Keyword

Analgesia; Colonoscopy; Meperidine

Introduction

Colonoscopy could be a standard and useful examination within the diagnosis of colorectal diseases. it's generally indicated for screening and surveillance for colonic neoplasia, the evaluation of abnormalities on a enema, and therefore the diagnosis of unexplained gastrointestinal bleeding, chronic diarrhea, or inflammatory bowel disease [1]. it's often uncomfortable and painful for patients and these unpleasant symptoms always make the procedure tougher to perform without sedation. the painful sensations must be elucidated. We report here the results of an evaluation of the analgesic effects of meperidine as a premedication for patients undergoing a colonoscopy without sedation.

Methods

This prospective study was conducted from July 2009 to September 2009 within the Chung Shan Medical University Hospital (Taichung, Taiwan), a tertiary middle. Three hundred and twenty-four consecutive outpatients who received a diagnostic colonoscopy without sedation were studied. A total of 217 outpatients (109 men, 108 women) were enrolled. All patients followed a colon-cleaning method with 24-hour dietary restriction and therefore the ingestion of either 90 mL of orthophosphate (C.B. Fleet, Lynchburg, VA, USA) or 2 L of polyethylene glycol electrolyte lavage solution. Hyoscine butylbromide (20 mg intramuscularly) was used as an antispasmodic drug. before colonoscopy, 25 mg meperidine was offered as an option for premedication pain relief. A includes patients who received meperidine as premedication and B includes people who did not receive meperidine. All the colonoscopic examinations were performed by one of three experienced endoscopists (C.C.L., T.H.C., or M.C.T.; each endoscopist had a minimum experience of 2000 colonoscopies) with one person and also the short-axis method. Colonoscopies were dispensed using an Olympus CF-260AZI colonoscope (Olympus Optical, Tokyo, Japan). Carbon dioxide was routinely used because the insufflating gas. The procedure was conducted without sedation and therefore the doctor could explain the real-time findings and perform therapeutic procedures (including biopsy and polypectomy) if needed. Successful cecal intubation was defined as reaching the cecum and taking pictures of the appendiceal orifice and therefore the valve. We evaluated abdominal pain during and immediately after the procedure. The questionnaire also included the acceptance of the procedure and therefore the willingness to repeat a colonoscopy without sedation betting on the patient's condition and doctor's advice. Quantitative data were summarized and are presented as mean variance values. Continuous variables were compared using the coed t-test for normal data and the Mann-Whitney U test for non-normal data. Categorical variables were compared using Fisher's exact test for different patient groups. We used logistic regression analyses to guage the importance of assorted factors to severe abdominal pain (VAS 4) during colonoscopy and these are presented with the chances ratios (OR) and 95% confidence interval (CI); $p < 0.05$ indicates statistical significance.

Results

Group A included 77 patients (31 men and 46 women, mean age 51.6 years) who received 50 mg meperidine intramuscularly prior to the colonoscopy. blood type included 140 patients

(78 men and 62 women, mean age 50.7 years) who received no analgesic drug (Table 1). The entire cecal intubation rate was over 99% in both groups without a statistically significant difference. The insertion time was 7.14 5.45 minutes in A and 6.24 4.24 minutes in type B ($p < 0.309$). There was no difference in withdrawal time between the 2 groups (Table 1). No major adverse event, such as hypotension or respiratory distress, occurred during this study. Abdominal pain was evaluated using VAS (0e10). A compared with blood group ($p < 0.055$). Table 2 shows the acceptance of the procedure and therefore the willingness to repeat the colonoscopy if necessary. No significant difference was seen between the 2 groups in acceptance for the procedure. The willingness to repeat this procedure also had no significant difference between the two groups [76/77 (98.7%) in A vs. 135/140 (96.4%) in Group B; Table 2]. Univariate analyses showed that female sex, meperidine use, and endoscopist were related to the next risk of severe abdominal pain (VAS 4) during colonoscopy without sedation. Different endoscopists also correlated with severe pain when compared with one another (Table 3). The subgroup and multivariate analysis in our study confirmed that ladies experienced more abdominal pain during colonoscopy without sedation than men. All three endoscopists during this study had performed over 2000 colonoscopies each, but the pain score still showed a big inter-endoscopist difference. These results imply that even experienced endoscopists need continued training or an improvement of skills in colonoscopy without sedation.

Discussion

Our study showed that female sex and endoscopist were associated with abdominal pain during colonoscopy without sedation, but not an absence of premedication with meperidine. Premedication with meperidine wasn't related to a difference in cecal intubation rate and total insertion time during colonoscopy without sedation. Although the proportion of ladies is higher (59.7% vs. 40.3%) within the group using meperidine, multivariate analysis failed to show a big correlation between abdominal pain and meperidine. Contrary to experience from usual practice and customary belief, the routine administration of meperidine before colonoscopy does not reduce abdominal pain during this procedure. These results suggest that colonoscopy without sedation is well accepted and feasible whether premedication with meperidine is employed or not In the USA, the sedation of patients for colonoscopy is routine

and will relieve patient anxiety and discomfort, improve the end result of the examination, and diminish the patient's memory of the event [15]. the foremost common choice of sedative is benzodiazepine alone or together with an opiate. Meperidine could be a common opioid drug used for analgesia and partial sedation. Combinations of benzodiazepine and opioid drugs are often used, but may increase the danger of oxygen desaturation and cardiorespiratory complications [15]. One previous study showed no difference in abdominal pain during colonoscopy in patients receiving a mix of midazolam and meperidine, or either drug given alone [16]. However, another study showed that a mix of those two drugs provided better patient tolerance to the procedure and fewer pain during the colonoscopy than midazolam alone [17]. In contrast with the USA, colonoscopy is usually performed without sedation in Taiwan and lots of Asian countries. the benefits of colonoscopy without sedation include the prevention of sedation-related complications, reduction in recovery time after the procedure, and a lower cost. A recent study also showed primary screening with colonoscopy without sedation is possible, like sigmoidoscopy [13]. Meperidine is sometimes used for analgesia prior to colonoscopy without sedation in our daily practice. it's administered within half-hour before the examination via the intramuscular route in our outpatient department; however, some adverse effects like dizziness, nausea, vomiting, or hypotension may occur. In our findings, the performance of the procedure and therefore the patient's abdominal pain weren't associated with the utilization of meperidine during colonoscopy without sedation. Meperidine might not be necessary as a premedication for colonoscopy without sedation. Although sedation for colonoscopy is standard within the USA, some facilities do offer the choice of colonoscopy without sedation. One recent study conducted within the USA noted that 28% of patients changed their choice from colonoscopy with sedation to colonoscopy without sedation after being informed of the benefits and downsides of those two options. quite 90% of patients would accept further colonoscopy with no sedation and 75% had a decent or excellent experience [7]. Our results also showed a high acceptance for colonoscopy without sedation (good or excellent in more than 90% patients) and our patients were willing to repeat the procedure without sedation.

Table 1 Basic characteristics of study participants undergoing colonoscopy without sedation with or without meperidine as a premedication.

	With meperidine (Group A; n = 77)	Without meperidine (Group B; n = 140)	p
Male sex, %	40.3	55.7	0.034
Age (y)	51.6	50.7	0.410
Biopsy or polypectomy, n (%)	25 (32.5)	60 (42.6)	0.134
Abdominal pain			
In process of examination	3.54 ± 3.13	2.46 ± 2.75	0.009*
Male	2.81 ± 3.04	1.85 ± 2.42	0.086
Female	4.20 ± 3.20	3.45 ± 3.01	0.225
At end of examination	0.70 ± 1.75	0.10 ± 0.46	0.000*
24 hours after examination	0.08 ± 0.49	0.14 ± 0.78	0.495
Cecal insertion time (min)	7.14 ± 5.45	6.24 ± 4.24	0.309
Withdrawal time (min)	6.82 ± 5.00	7.69 ± 5.33	0.330
Total cecum intubation rate (%)	100	99	

Data are presented as mean ± SD.

* $p < 0.05$.

Table 2 Acceptance of colonoscopy without sedation and willingness to undergo examination again.

	With meperidine (Group A)	Without meperidine (Group B)	p
Acceptance, n (%)			
Excellent	55 (71.4)	103 (73.9)	0.079
Good	18 (23.1)	29 (21.6)	
Fair	4 (5.2)	1 (0.7)	
Poor	0 (0)	1 (0.7)	
NA ^a	0 (0)	6 (4.1)	
Patient willing to undergo colonoscopy without sedation again (%)	98.7	96.4	0.426

^a In Group B, acceptance was not recorded in six patients. The remaining 134 patients were analyzed and compared with Group B.

An unnecessary number of colonoscopies with sedation and also the enormous cost and risk of cardiovascular complications. In addition to abdominal pain, we evaluated several quality indicators for colonoscopy (cecum reach rate, insertion time, and withdrawal time) [18]. The three endoscopists had good performances in colonoscopy without sedation. Both groups had a high cecum reach rate (more than 99%) and adequate insertion and withdrawal times, as in other studies. Our study had several limitations. Firstly, it had been not a randomized study.

Table 3 Association between risk factors and abdominal pain (visual analog scale ≥ 4 points) using univariate and multivariate analyses.

Risk factor	Univariate analysis			Multivariate analysis		
	Odds ratio	95% Confidence interval	<i>p</i>	Odds ratio	95% CI	<i>p</i>
Sex (female vs. male)	2.468	1.398–4.358	0.002	2.313	1.301–4.113	0.004*
Age (>60 y vs. ≤ 60 y)	1.455	0.812–2.608	0.208			
Meperidine (Group A vs. Group B)	1.916	1.081–3.396	0.026*	1.723	0.958–3.099	0.069
Endoscopy procedure (biopsy/polypectomy vs. no biopsy/polypectomy)	0.694	0.391–1.232	0.212			
Previous abdominal surgery (with previous abdominal surgery vs. without previous abdominal surgery)	1.464	0.772–2.776	0.243			
Endoscopist ^a						
A (M.C.T.)	2.018	0.942–4.323	0.071	1.861	0.857–4.041	0.116
B (T.H.C)	2.972	1.385–6.378	0.005 *	2.557	1.171–5.582	0.018*

* *p* < 0.05.

^a Endoscopist C.C.L. was used as reference.

The patients could favor to receive or not receive meperidine before the colonoscopy and also the demographic data during this study showed a better proportion of women posing for meperidine. Secondly, the patients who asked for analgesia might also have had underlying anxiety or a fear of painful sensations. to beat these limitations, we want further randomized controlled trials and to feature to the questionnaire to judge the psychiatric status of patients. In conclusion, premedication with meperidine wasn't associated with a discount in abdominal pain during colonoscopy without sedation. The insertion time and cecum intubation rate showed no difference between patients with or without meperidine. Premedication with meperidine isn't mandatory before colonoscopy without sedation if the procedures are performed skillfully.

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